Overview

NOTE: Beginning LATE May 2005, the HP R5500 XR UPS is qualified for use on HP9000 and Integrity Servers.

Description

HP UPS Solutions

Product Number	VA	Watts	Family	Supported Software	Output	AC Requirements
J4367A	3.0 kVA	2.7 kW	HP Rack System/E R3000 XR UPS	Lansafe III and Rack Power Manager	200-240V	Dedicated branch circuit, 20 A
J4370A	6.0 kVA	6.0 kW	HP Rack System/E R6000 XR UPS	Lansafe III and Rack Power Manager	200-240V	Dedicated branch circuit, 40 A with overcurrent protection
J4373A	12.0 kVA	12.0 kW	HP Rack System/E R12000 XR UPS	Lansafe III and Rack Power Manager	200-240V	Dedicated branch circuit, 100 A with overcurrent protection
A1353A*	2.0 kVA	1.4 kW	PowerTrust II-LR	NA	120V	Dedicated branch circuit, 20 A with overcurrent protection
A1354A*	2.0 kVA	1.4 kW	PowerTrust II-LR	NA	230V	Dedicated branch circuit, 20 A with overcurrent protection
A1356A*	3.0 kVA	2.1 kW	PowerTrust II-LR	NA	230V	Dedicated branch circuit, 20 A with overcurrent protection
A6583A*	4.5 kVA	4.0 kW	PowerTrust II-MR	NA	230V	
A6584A*	9.0 kVA	6.5 kW	PowerTrust II-MR	NA	230V	
A6585A*	12.0 kVA	8.0 kW	PowerTrust II-MR	NA	230V	

*NOTE: Discontinued Model

Server Watt Ratings for UPS loading

Server	Watt Rating for UPS loading (Maximum/Typical)	UPSs Typically Used	Approximate Battery Runtime* (Minutes)
rx1600	NA	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	NA
rp2400	400 W/350 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	40-65 minutes
rp2405	350 W/290 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	50 minutes
rp2430	350 W/290 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	50 minutes
rp2450	600 W/450 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	33-55 minutes
rp2470	400 W/350 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	40-65 minutes
rx2600	715 W/ -	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	27 minutes

Overview

rp3400 Series	1350W/600 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	11-33 minutes 50-90 minutes 23-63 minutes 27-75 minutes
rp4440	1600 W/1065 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	10-15 minutes 38-60 minutes 33-50 minutes 29-49 minutes
rx4610	1860 W/ -	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	8 minutes 34 minutes 29 minutes 28 minutes
rx4640	1065 W/ -	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	15 minutes 60 minutes 50 minutes 49 minutes
rp5405 rp5470	1360 W/1008 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	11-16 minutes 45-60 minutes 23-51 minutes 27-50 minutes
rp5430	936 W/738 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	18-25 minutes
rp5470	1360 W/1008 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	11-16 minutes 45-60 minutes 23-51 minutes 27-50 minutes
rx5670	952 W/500 W	J4367A HP R3000 XR UPS 2.7 kW/3.0 kVA	18-35 minutes
rp7400	3000 W/2200 W	J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA J4373A HP R12000 XR UPS 12.0 kW/12.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	18-26 minutes 36-50 minutes 14-51 minutes 13-50 minutes
rp7405 rp7410	3000 W/2150 W	J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA J4373A HP R12000 XR UPS 12.0 kW/12.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	18-26 minutes 36-50 minutes 14-51 minutes 13-50 minutes
rx7620	3000 W/2200 W	J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA J4373A HP R12000 XR UPS 12.0 kW/12.0 kVA 326529-D71 HP R5500 XR UPS (US/Japan) 4.5 kW/5.5 kVA 326529-B31 HP R5500 XR UPS (INTL) 5.4 kW/6.0 kVA	18-26 minutes 36-50 minutes 14-51 minutes 13-50 minutes
rp8400	5045 W/3046 W	J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA J4373A HP R12000 XR UPS 12.0 kW/12.0 kVA	8-18 minutes 21-36 minutes
rx8620	4680 W	J4370A HP R6000 XR UPS 6.0 kW/6.0 kVA J4373A HP R12000 XR UPS 12.0 kW/12.0 kVA	10-18 minutes 28-45 minutes

Overview

*NOTE: Battery runtime varies with the number of UPSs, load, and number of battery modules. Extended Runtime Modules (ERMs) can be added to the HP Rack System/E XR UPSs to add battery runtime.

Continuous Power During Short Interruptions of Input Power

All of the UPSs offered by HP will provide battery backup to allow for continuous power to the connected equipment in the event of a brief interruption in the input power to the UPS. Transaction activity will continue during brief power outage periods as long as qualified UPS units are used to provide backup power to the SPU, the Expansion Modules, and all disk and disk array products.

Runtimes

The UPS will provide battery backup to allow for a graceful shutdown in the event of a power failure. Typical runtime on HP UPSs vary with the kVA rating, the load, and the number of battery modules or ERMs. The capability of adding additional battery modules or ERMS can maximize value and rack space.

HP UPS Configuration Guidelines

Each HP UPS is capable of supplying power to one or more systems or peripheral devices as long as the total watts capacity of the UPS is not exceeded. If the total watt requirement exceeds the capacity of a single UPS, upgrade to a larger UPS or spread the load across more than one UPS. Perform the following steps to determine the total watt capacity.

Step 1.

Calculate the watt demand of each component.

- If the watt rating for a device connecting to the UPS is specifically stated, use this value. The power consumption values provided for most HP 9000 Servers fall into this category. These values are already adjusted for power factor correction.
- If the power rating for a device is specified in "Power Factor Corrected" (PFC) Watts, use this value. These values are already adjusted for power factor correction.
  Watt rating for UPS loading = PFC Watts
- If the power rating for a device is not available, multiply the current requirement for the device by the voltage used (e.g., 120V or 240V) to obtain the watt rating. For HP devices, use the current rating supplied in the racking section of this Configuration Guide. For other devices, use the maximum current rating listed on the back label of the device.
  Watt rating for UPS loading = Current Rating × Voltage

Step 2.

Add the watts requirements for all the systems and devices to determine the total watts figure needed.

Step 3.

Verify that the total watts requirement does not exceed the capacity of the HP UPS.

Factory Integration

The HP XR UPSs can be ordered with factory or field integration options.

NOTE: Batteries will NOT be installed in the HP R6000 XR UPS when factory integrated.

NOTE: Batteries and ECUs will NOT be installed in the HP R12000 XR UPS when factory integrated.

Power Connections

HP XR UPS Specifications

Power Protection

Product Number	Option Number	NOM Out	Output Receptacles	Input Receptacles	Input Plug	AMP In	PDU Product Number
XR UPS							
J4367A	OD1, 001	200-240V	1 x L6-20R (20A) and 9 x IEC 320-C13 (10A)	10.8 foot Non-detachable power cord	L6-20P	12.6 -14.5A	
J4367A	OD1, 001	200-240V	1×C19 and 9×IEC 320 C13 (10A)	10.8 foot Non-detachable power cord	IEC-309 16A	12.6 -14.5A	
J4370A*	OD1, 001 002	200-240V	3 x IEC-320 (16A) and 12 x IEC-320 (10A)	14.8 foot Non-detachable power cord	IEC309 60A	28 - 30A	
326529-D71	OD1	200 240V	4xC19, 4xC13, and 1xL6-30R on two 15A load segments	9.8-foot non detachable power cord	L6-30P	15A	Ships with 4 pdu sticks not supported with Rack System /E cabinets. If a PDU is required for the /E rack, order E7676A
326529-B31	OD1	220-240V	4xC19 and 4xC13 on two 15A load segments, and a 32A IEC-309	9.8-foot non detachable power cord	IEC-309	32A	
J4373A	OD1, 001 002	200-240V	Hardwire, requires 60A pdu purchase	Hardwire	None	68 - 72A	Up to two E7683A or E7684A 60A pdus can be connected (Electrician must remove power connector and hardwire to UPS)
HP PowerTrust II LR (Off CPL 1/1/04)							
A1353A**	1.4 kW	120V	C19 and 4 x C13	C20	L5-20P	20A	
A1354A**	1.4 kW	230V	C19 and 4 x C13	C20	L6-20P	8A	
A1356A**	2.1 kW	230V	C19 and 4 x C13	C20	L6-20P	12.8A	

HP PowerTrust II - MR (Off CPL 10/1/02)						
A6583A**	230V	Hardwire	Hardwire	None	30A	A6588A
		2 x L6-30R and 4 x C19	Hardwire	L6-30P		A6589A
		2 x L6-30R and 4 x C19	Hardwire	None		A6592A
		IEC309 30A and 6 x C19	Hardwire	None		A6494A
		IEC309 30A and 6 x C19	Hardwire	IEC309 30A		A6495A
A6584A**	230V	Hardwire	Hardwire	None	50A	A6588A
		2XL6-30R and 4XC19	Hardwire	L6-50P		A6590A
		IEC309 60A and 6XC19	Hardwire	IEC309 60A		A6591A
		2XL6-30R and 4XC19	Hardwire	None		A6592A
		IEC309 30A and 6XC19	Hardwire	None		A6494A
		2XL6-30R and 4XC19	Hardwire	IEC309-60		A6596A
A6585A**	230V	Hardwire	Hardwire	None	70A	A6588A
		2XL6-30R and 4XC19	Hardwire	None		A6592A
		IEC309 30A and 6XC19	Hardwire	None		A6494A
* Physically all models are identical; the only difference is the rating of the input power plug. ** Discontinued model						

RS-232 Connections

An RS 232 cable is provided with HP UPSs to provide communication between the UPS and server. The cable that ships with R6000 is not inter changeable with the cable that ships with R3000, R5500 and R12000. If the provided RS 232 cable is not long enough, order A1358A for a 25 foot DB 9 extension cable that attaches to the UPS serial cable.

The HP XR UPS products will automatically support baud rates between 1200 and 19200.

Network cards are offered for the XR UPS products, but are not tested or supported on HP-UX.. HP Power Manager software is required to use the XR UPS SNMP cards.

HP Power Manager

As of Late 2004, HP Power Manager is supported on the HP R3000, R6000, and R12000 XR UPS products. Details and download information are available at: http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/software/power-manager/index.html

The R5500 will only ship with HP Power Manager, and will not be supported with Lansafe III software.

Note: HP Power Manager is not supported in EMS and ISEE environments.

Lansafe III

Lansafe III ships with, and is only supported on the HP R3000, R6000, and R12000 XR UPS products. All versions of Lansafe III are also available for download from the HP Software Depot website:
http://www.software.hp.com/cgibin/swdepot_parser.cgi/cgi/displayProductInfo.pl?productNumber=J43xxASW

Lansafe Power Management Software provides automatic, unattended and graceful shutdown of computer systems throughout the network during an extended power failure. It continuously monitors the UPSs status and automatically notifies defined users locally and remotely about UPS events. Lansafe can shutdown a large group of computers running multiple Operating Systems (i.e. UNIX, Windows, Linux).

Lansafe III is supported on:

- MS Windows 95, 98, NT, 2000, XP
- MS Windows Server Enterprise Edition (32 and 64 bit)
- RedHat Linux 6.2, 7.x, 8
- HP UX 10.10, 10.20, 11.00, 11.11, 11.22, 11.23
  NOTE: Lansafe III is not supported in EMS and ISEE environments.

Lansafe III can be configured to shutdown multiple computers with just one UPS over a TCP/IP network. The group controller must be connected to the UPS via a serial cable. The maximum number of computers supported in a group is 64.

The following table details which UPS management software products are supported for each UPS product family:

	HP XR UPSs	PowerTrust II-LR PTP (std)	PowerTrust II-MR with PTP Card (std)
HP Power Manager	X		
Lansafe III	X, except the HP R5500 XR		
ups_mond		X	X
UPS Manager II (Off CPL 10/1/02)			X

UPS Features and Technologies

The HP Rack System/E R3000 XR UPS uses a digital signal processor (DSP) to control three solid state electronic power stages instead of a transformer to regulate and condition power to protected loads. This allows for reliable solid state electronics, higher performance, and cost-effective design. The DSP controls voltage through three electronic stages of the UPS as compared to using a series of relays for mechanical tap switching with a transformer.

The first stage includes a front-end filter and surge protection with an electronic boost circuit controlled by the DSP. The filter and surge section condition the power by removing damaging spikes and surges. The electronic boost circuit provides dynamic voltage regulation by boosting the voltage when the input voltage sags. The electronic voltage boost controlled by the DSP enables a well-regulated output without having to use battery power. This results in improved voltage regulation for the load and increased battery life. The second Inverter (balancing) stage functions as a balancing circuit during normal operation, a DC to AC Inverter during battery operation, and also provides energy for the battery charger. The third stage of conditioning functions as an electronic buck that is controlled by the DSP and regulates the output voltage when the input voltage is higher than required. This innovative technology improves the performance over traditional line-interactive UPS designs while reducing the cost, weight, and size of traditional double-conversion online UPS designs. The DSP controller manages all aspects of the UPS including the following:

- Sensing input voltage levels
- Setting and controlling buck and boost voltage regulation based on input voltage
- Controlling the inverter and battery charger
- Providing one button voltage configuration control from the front panel
- Switching to electronic bypass

The HP Rack System/E R6000 XR UPS is a line-interactive UPS that occupies only 6 U of space. The R6000 UPS features:

Power Protection

- 6000W/6000VA unity rating
- Load segment control with five load segments available
- Front Panel LCD backlit display for easy configuration, monitoring, and operation
- Support for Extended Run Modules to extend battery operation time

The HP Rack System/E R12000 XR UPS uses a high-speed Digital Signal Processing (DSP) design to replace complex communication wiring and circuitry. The R12000XR also employs online technology, ensuring reliable, conditioned power feeding to connected equipment. The R12000XR features a modular architecture that allows for redundancy configurations based on power requirements. The UPS can be configured as a
12KVA UPS, a 9KVA UPS in N+1 redundant mode, a 6KVA UPS in N+2 redundant mode, or a 3KVA UPS in N+3 redundant mode.

The PowerTrust II-LR is an online UPS designed for use in a variety of configurations involving HP SPUs and/or peripheral devices. The UPSs are designed to work in rackmount configurations so that the power distribution unit (PDU)-of a 1.1-metre, 1.6-metre, or 2.0-metre high expansion cabinet-plugs into the IEC 320 C19 receptacle at the back of the UPS for power to the rack. The unit then provides UPS protected power for all devices in the rack that are plugged into that PDU

HP XR UPS ERM Modules

Extended runtime modules extend available battery backup time in case of sudden, brief power outages. For extended runtime examples, see the Compaq runtime data sheet at:
ftp://ftp.compaq.com/pub/products/servers/proliantstorage/power-protection/backup_times.pdf

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PowerTrust II-LR Battery Pack (A1357A)

HP's PowerTrust II-LR Battery Pack is an external hot swappable battery pack designed to work exclusively with the HP PowerTrust II-LR Uninterruptible Power Systems. Each PowerTrust II-LR UPS (A1353A, A1354A or A1356A) ships with one battery pack. To increase the runtime of the UPS additional battery packs can be ordered. See the table below for typical runtimes.

PowerTrust II LR Battery Run Time Battery Pack Selection Table

UPS	Battery Packs	Runtimes for typical applications in minutes at various load ranges						
		200 W	500 W	700 W	1000 W	1400 W	1700 W	2000 W
A1353A and A1354A 1.4-kW/2-kVA	1 2 3 4 5	165 314 518 609 716	60 122 212 248 311	39 85 155 180 240	23 57 99 137 184	14 35 60 85 115	N/A	N/A
A1356A 2.1-kW/3.0-kVA	1 2 3 4 5	156 278 439 654 850	63 112 178 265 344	41 78 123 185 244	26 53 83 126 169	15 43 64 94 121	10 30 45 66 85	8 25 37 53 68

PowerTrust II-MR Battery Pack

HP's PowerTrust II-MR Battery Pack is an external hot swappable battery pack designed to work exclusively with the HP PowerTrust II-MR Uninterruptible Power Systems. The advanced battery charger reduces battery recharge time, increases battery service life and protects against damage caused by deep discharge. PowerTrust II-MR UPS (A6583A) ships with one battery pack, and the 6.5-kW and 8.0-kW (A6584A and A6585A) UPSs ship with a two battery pack set. Below are the part numbers:

- A6586A-PowerTrust II-MR 4.0-kW battery pack
- A6587A-PowerTrust II-MR 6.5-kW and 8-kW battery pack set

To increase the runtime of the UPS additional battery packs can be ordered. See the table below for typical runtimes.

Battery Backup Times in Minutes

UPS Accessories

UPS Power/ Model	Battery Pack (Quantity)	UPS Total Load Level								
		1000W	2000W	3000W	4000W	5000W	6000W	6500W	7000W	8000W
4.0 kW/4.5 kVA	(1)	95	29	14	9	N/A	N/A	N/A	N/A	N/A
A6583A	A6586A (2)	106	52	32	22	N/A	N/A	N/A	N/A	N/A
	A6586A (3)	165	80	52	38	N/A	N/A	N/A	N/A	N/A
	A6586A (5)	290	140	95	66	N/A	N/A	N/A	N/A	N/A
6.5 kW/9 kVA	(1)	106	45	30	22	17	12	11	N/A	N/A
A6584A	A6587A (2)	165	87	60	45	39	34	29	N/A	N/A
	A6587A (3)	320	155	100	72	55	45	42	N/A	N/A
	A6587A (5)	520	280	185	140	110	90	85	N/A	N/A
8 kW/12 kVA	(1)	106	45	30	22	17	12	11	10	9
A6585A	A6587A (2)	165	87	60	45	39	34	29	27	21
	A6587A (3)	320	155	100	72	55	45	42	40	35
	A6587A (5)	520	280	185	140	110	90	85	75	68

PowerTrust II LR SNMP/WEB Card (A1359A)-Discontinued

HP's PowerTrust II-LR SNMP/WEB Card is a network adapter for PowerTrust II-LR Uninterruptible Power Systems that provides both SNMP and HTTP compatibility. This allows the user to easily monitor, manage, and safely shutdown remote UPS-protected servers, mass storage devices, workstations, and other key internetworking devices in a controlled manner. PowerTrust II-LR SNMP/WEB Cards provide a self-contained link between the PowerTrust II-LR UPS and an Ethernet LAN/WAN, allowing the UPS to be remotely monitored and controlled from the next room, the next building, or the next state with no additional overhead on any server. These dedicated cards provide the essential network connection and pathway between UPS and any industry-standard network management platform or popular Web browser. PowerTrust II-LR SNMP/WEB Card also control automatic shutdown of protected computer systems with the use of the included client software. It is also possible to remotely change UPS-related parametres to specific requirements, display 176 MIB variables such as line voltage and frequency, battery voltage, UPS load, and various alarms. The SNMP/WEB card uses a private MIB, which makes it incompatible with any other software.

The use of this accessory will allow for multiple servers managed by one UPS, but does not support multiple UPSs in a single server configuration.

PowerTrust II-MR Communications (Discontinued)

- A6593A-SNMP Card Communications Kit (Off CPL 10/1/2002)
- A6597A-Contact Closure Card Kit with cable for direct connection with Native NT or remote status connection (Off CPL 10/1/2002)

PowerTrust II MR Protocol Card (PTP)-Discontinued

This card is shipped standard with each PowerTrust II MR UPS. It occupies one of the two I/O slots available on the rear of the MR UPS. This card provides for RS 232 connectivity between the UPS and the HP UX system for use with ups_mond or UPS Manager II software. The port is also used with UPSUTIL for MPE/iX.

UPS Accessories

HP UPS Manager II-Discontinued

HP UPS Manager II is an industry based power management solution for today's distributed IT environment. Providing intelligent UPS capabilities, HP UPS Manager II lite is designed for seamless integration with the entire network and system management of one's IT structure. This application provides a wide feature set, such as a graphical user interface, multiple servers and multiple UPSs in the same environment managed by one management station, scheduled shutdown and restart, etc. HP UPS Manager II consists of following components:

- Management Station running HP UPS Manager II
- HP UX Client for communication with Management Station. The clients must run on every satellite protected through a supported UPS system and establishes communication to Management Station.
- PowerTrust Proxy Agent to manage PowerTrust UPS system. Converts the internal RS 232 PowerTrust protocol into SNMP MIB II standard variables to communicate with HP UPS Manager II

HP UPS Manager II is based on the SNMP (Simple Network Management Protocol) the de facto standard in communicating with networked devices. A special software maps the internal PowerTrust RS 232 protocol to SNMP values. This Proxy Agent is part of the HP UPS Manager II package. Software installation and configuration however is not included.

This application can be run using the PTP interface, or via the SNMP card which is currently available for the PowerTrust II MR product only. When using the PTP interface, only the management station (server) requires the RS 232 connection. When multiple servers are involved, all other servers are loaded with the UPS Manager II Client software, and communication occurs between them and the management station via SNMP.

When using the PowerTrust II MR SNMP card, no RS 232 connection is required between the server and the UPS.

The key features include:

- Graphical user interface
- Power scheduling and energy management-Schedule shutdowns and restarts for maintenance, security or energy saving reasons.
- Alarm configuration-Each network component can be managed to handle alarm conditions associated with power outages or UPS failures. The predefined alarm responses can be easily tailored to the users specific needs.
- Dependency management-The ability to account for complex client/server dependencies is the most outstanding feature of HP UPS Manager II. With the aid of shell scripts, the system manager can ensure a controlled cascaded shutdown of cluster members. In a client/server database environment he/she can ensure that all database clients have been shut down before the database server shuts down.
- Supports multiple servers and multiple UPS' with one UPS Manager II management station.

For more information (user guides, training slides, etc.) see: http://racksolutions.corp.hp.com/products/power/index.html

HP XR UPS-2.7 kW/3.0 kVA Unit (J4367A), 6.0 kW/6.0 kVA Unit (J4370A), and 12.0 kW/12.0 kVA Unit (J4373A)

HP XR UPS Specifications

	J4367A - R3000 2.7 kW/3.0 kVA	326529-D71 R5500		J4370A - R6000 6.0 kW/6.0 kVA	J4373A 12.0-kW/12.0-kVA
Capacity (VA/Watt)	2700/3000	5500/4500		6000/6000	12000/12000
Dimensions (Inches) H×W×D (cm)	3.5×19×24.5 22.6×122.6×158.1 UPS = 2 EIA units ERM = 2 EIA units	5.13×17.38×26 33.1×112.1×167.7 UPS = 3 EIA units ERM = 3 EIA units		10.5×17.25×25.75 67.7×111.3×166.1 UPS = 6 EIA units ERM = 3 EIA units	17.5×17.5×28.6 112.9×112.9×184.5 UPS = 10 EIA units ERM = 4 EIA units
Weight	UPS = 82 lbs (37.2 kgs)	UPS = 150 lbs (68 kgs) ERM = 167 lbs (75 kgs)		UPS = 250 lbs (113.6 kgs)	UPS = 420 lbs (189 kgs)
Input Receptacle	NA, non-detachable cord with L6-20P plug	NA, 9.8-foot non detachable power cord with LC-30P or IEC-309 plug		NA, non-detachable cord with IEC309 plug	NA - hardwired
Output Receptacles Quantity, Type	See the **HP XR UPS Specifications** section				
Input Voltage Range	200-240	200-240	220-240	200-240	200-240
Output Voltage Range (Default factory setting)	200/208/220/230/240 via front panel				
Output Voltage Waveform	Sine Wave				
Operating Frequency-Online (user adjustable)	50/60 Hz +/-5% auto-sensing (+/-2% and +/-7%)				
Transfer Time	0 ms				
Output Protection	Electronic overload and short circuit protection				
Recharge Time to 90%	3 hours to 90%	3 hours to 80%		4 hours to 90%	N/A
Communications	RS-232 serial port				
Maximum Extended Runtime Modules supported	1×J4368A	2×326564-B21		2×J4371A	2×J4375A
Accessories Included	Software CD, UPS to host communication cable, manuals on CD ROM				
Optional Accessories	Extended Runtime Modules are the only tested accessories, but other accessories are available: http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/options/index.html				

PowerTrust II LR-1.4 kW/2.0 kVA Unit 120V (A1353A), 1.4 kW/2.0 kVA Unit 230V (A1354A), and 2.1 kW/3.0 kVA Unit 230V (A1356A))-Discontinued

PowerTrust II LR Specifications

	A1353A 1.4-kW/2.0-kVA 120V	A1354A 1.4-kW/2.0-kVA 230V	A1356A 2.1-kW/3.0-kVA 230V	A1357A Battery Pack
Capacity (VA/Watt)	2000/1400	2000/1400	3000/2100	N/A
Dimensions (Inches) H×W×D (mm)	3.35×19.0×19.3 85×483×490 UPS = 2 EIA units	3.35×19.0×19.3 85×483×490 UPS = 2 EIA units	3.35×19.0×19.3 85×483×490 UPS = 2 EIA units	3.35×19.0×19.3 85×483×490 Battery Pack = 2 EIA units
Weight	Total 94 lbs (43 kg); 28 lbs (13 kg) Electronics Unit, 66 lbs (30 kg) External Battery Pack	Total 94 lbs (43 kg); 28 lbs (13 kg) Electronics Unit, 66 lbs (30 kg) External Battery Pack	Total 94 lbs (43 kg); 28 lbs (13 kg) Electronics Unit, 66 lbs (30 kg) External Battery Pack	66 lbs (30 kg) External Battery Pack
Input Receptacle Quantity, Type, (Amps)	1 - C20 (16A)	1 - C20 (8A)	1 - C20 (12.8A)	N/A
Output Receptacles Quantity, Type, (Amps)	4 - C13 (10A) 1 - C19 (16A)	4 - C13 (10A) 1 - C19 (16A)	4 - C13 (10A) 1 - C19 (16A)	N/A
Input Voltage Range	90-138 VAC	180-260 VAC	180-260 VAC	N/A
Output Voltage Range (Default factory setting)	100/110/120/127 VAC (120)	208/220/230/240 VAC (230)	208/220/230/240 VAC (230)	N/A
Output Voltage Waveform	Sine Wave			N/A
Operating Frequency-Online (user adjustable)	50/60 Hz +/-5% auto-sensing (+/-2% and +/-7%)			N/A
Transfer Time	0 ms			N/A
Output Voltage Regulation online	Up to 110% for 10 seconds then transfer to inverter			
Output Protection	Electronic overload and short circuit protection			N/A
Recharge Time to 90%	8 hours			N/A
Communications	RS-232 serial port WEB/SNMP optional			N/A
Accessories Included	UPS-to-host comm. Cable Manuals			N/A
Optional Accessories	Additional battery packs SNMP/WEB Card Factory rack kit Field rack kits RS-232 DB-9 to DB-25 PCI MUX Cable RS-232 DB-9 to DB-25 MDP MUX Cable			N/A

PowerTrust II-MR-4.0-kW/4.5-kVA Unit 230V (A6583A), 6.5-kW/9-kVA Unit 230V (A6584A), and 8-kW/12-kVA Unit 230V (A6585A)-Discontinued

These UPS products, along with the PowerTrust II-LR, are HP branded UPSs that have been designed, tested and qualified to meet HP's high standard. Some benefits to the customers are:

- Data protection-instantaneous backup power with online, double conversion technology and extended run time.
- Equipment protection-spikes and sags from mains power are removed with online, double conversion technology.
- No repair downtime-hot swappable units and battery packs.
- Network and remote management-WEB and SNMP functionality.
- Economic and ergonomic-less rack space and lower weight with latest technology and design.
- Flexible-extended run times (up to several hours) with additional battery packs. The on-line double conversion technology assures power quality through any type of power disturbance.

The units are designed for use in a variety of configurations involving HP SPUs and/or peripheral devices. The UPSs are designed to work in rackmount configurations so that the power distribution unit (PDU)-of a 1.1-metre, 1.6-metre, or 2.0-metre high expansion cabinet-plugs into the Power Interface Option (PDP) for power to the rack. The unit then provides UPS protected power for all devices in the rack that are plugged into that PDU. The UPSs can be ordered along with a new expansion cabinet and rackmounted SPU in a factory integrated configuration (option #0D1); separately as part of a field upgrade (option #001) to an existing expansion cabinet. Includes RS-232 DB-9f/DB-9m cable and all manuals.

PowerTrust II MR Specifications

Model	A6583A	A6584A	A6585A
Dimensions (H×W×D)	48.3 × 35.4 × 46.2 cm UPS = 4 EIA units Battery Pack = 4 EIA Units (min 1)	48.3 × 57.5 × 46.2 cm UPS = 5 EIA units Battery Pack = 4 EIA Units (min 2)	48.3 × 57.5 × 46.2 cm UPS = 5 EIA units Battery Pack = 4 EIA Units (min 2)
Weight	Total (76 kg); (22 kg) Electronics Unit, (54 kg) External Battery	Total (138 kg); (30 kg) Electronics Unit, (108 kg) External Battery	Total (138 kg); (30 kg) Electronics Unit, (108 kg) External Battery
Power	4.0 kW/4.5 kVA	6.5 kW/9 kVA	8 kW/12 kVA
Input-Voltage Range	Normal: 200-240; During brown outs: 84/120/160 to 264 without using battery power		
Frequency Range	50/60 Hz, auto-switching	50/60 Hz, auto-switching	50/60 Hz, auto-switching
Sinusoidal Output Voltage	230 Volts	230 Volts	230 Volts
Short Circuit Current (A)	82	164	164
Overload Capacity (Online)	130% for 60s; 160% for 10s; 250% for 1s		

HP PowerTrust UPS Input/Output Power Configurations

Technical Specifications

Product Number	Input Power Configuration	Output Power Receptacles
A6583A 4.0 kW/4.5 kVA (230V)*	200-240V PDP: L6-30P, NEMA 50P, IC309-30, hardwired	Through PDP (Power Distribution Panel) (4) IEC-H320R, (2) NEMA L6-30R
A6584A 6.5 kW/9.0 kVA (230V)*	200-240V PDP: NEMA 50P, IC309-60 (US/Israel), hardwired	Through PDP (Power Distribution Panel) (4) IEC-H320R, (2) NEMA L6-30R
A6585A 8.0 kW/12.0 kVA (230V)*	200-240V PDP: IC309-60 (US/Israel), hardwired	Through PDP (Power Distribution Panel) (4) IEC-H320R, (2) NEMA L6-30R
*NOTE: Must order one PDP		

NOTE: For PowerTrust II-MR, order one Power Interface Option (PDP) or as a product for every UPS based on the location and line cord requirement. Below is the list of PDPs.

Description	Part Number or Option
Input/output hardwired PDP*	007
Power interface option, L6-30P plug line cord, with PDP-2, output, US/Japan	008
Power interface option, 6-50P plug line cord, with PDP-2, output, US/Japan	009
Power interface option, input hardwired with PDP-2, output, US/Japan	011
Power interface option, IC309 60A plug, line cord, with PDP-2 output, US/Israel	014
Power interface option, Input/output hardwired*	A6588A
Power interface option, L6-30P plug line cord, with PDP-2, output, US/Japan	A6589A
Power interface option, 6-50P plug line cord, with PDP-2, output, US/Japan	A6590A
Power interface option, input hardwired with PDP-2, output, US/Japan	A6592A
Power interface option, IC309 60A plug, line cord, with PDP-2 output, US/Israel	A6596A
*NOTE: Hardwire means the customer must provide their own physical connection between the I/O box to the power source or to the load as long as local codes are met, and the proper input breaker is used. This statement applies to both the input and output hardwire connections.	

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